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Idaho

Basin Outlook Report

January 1, 2001

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NATURAL RESOURCES
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Crater Meadows SNOTEL Site, North Fork Clearwater River Basin, Idaho

Basin Outlook Reports and Federal - State - Private Cooperative Snow Surveys

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<http://idsnow.id.nrcs.usda.gov/>

How forecasts are made

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. These forecasts are coordinated between hydrologists in the Natural Resources Conservation Service and the National Weather Service. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.

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IDAHO WATER SUPPLY OUTLOOK REPORT

January 1, 2001

SUMMARY

With the snow season almost half over, many water users in Idaho are hoping the second half brings more storms and moisture. Currently, the lowest snow water content levels are only half of normal in the Panhandle Region. This is low for an area that usually receives ample moisture. The highest snowpacks are near normal across the southern Idaho border. In comparison to other western states, the best snowpacks in the West stretch from southern Idaho to southern Colorado and are near to slightly above normal levels. December precipitation across Idaho ranged from 45-85% of normal. Water year to date precipitation ranges from 50% of average in the Panhandle to 80% in the Bear River basin. Current reservoir carryover storage varies across the state and is much less than what it was a year ago in some basins. January 1 streamflow forecasts call for 70-90% of average runoff for most basins. Adequate summer streamflow volumes are important not just for irrigation and recreation but also for hydropower, fish, wildlife and forest management purposes. With numerous hydropower plants throughout Idaho, monitoring Idaho's mountain snowpack provides crucial information for reservoir operators in deciding whether to store water, draft the reservoir for flood control or as long as it refills, and for hydropower production. Stay tuned to see how this year's water supply picture ends up. . . .

SNOWPACK

Snowpacks across Idaho vary from 50% of normal in the Panhandle Region to near normal in south central Idaho. Elsewhere in the state, snowpacks are about 65% of average in the Clearwater, Salmon and Payette basins and 70-80% of average in the Boise, Big Wood, upper Snake and Bear River basins. The St. Joe River basin snowpack is the 3rd lowest, while the North Fork Clearwater basin snowpack is the 5th lowest in the past 40 years. While conditions can still improve with more than half the snow season still to come, it may be difficult to return to "near normal" conditions in northern Idaho. We can monitor and predict Mother Nature, but often she has the last card to play. We have observed this the past several years -- from the lack of spring precipitation last year to the abundant precipitation in the spring of 1997 that producing flooding in the upper Snake River basin.

PRECIPITATION

December precipitation was 50% of normal in the Panhandle Region, Salmon, Wood and Lost basins. Elsewhere in the state, December precipitation ranged from 60-85% of average, with the highest amounts received in the Bear River basin. Looking at Bear Mountain SNOTEL, located 10 miles north of Pend Oreille Lake at 5,400 feet best summarizes the lack of precipitation in northern Idaho. Bear Mountain has received only 14 inches of moisture since October 1. Average is 41 inches. Water year to date precipitation totals also lag with the lowest amounts in the Panhandle Region and Clearwater basin at 47% and 66% of average, respectively. Elsewhere, the water year precipitation is in the 70-85% of average range.

RESERVOIRS

Reservoir storage varies across the state depending upon last season's drawdown and irrigation demand. Reservoirs that are 80% of average or better are Priest and Pend Oreille lakes, Dworshak, Boise and Payette Reservoir systems, Little Wood, the upper Snake reservoir system and Bear Lake. However, Palisades Reservoir is only 56% of average. Magic and Mackay reservoirs are about 50% of average. Salmon Falls Reservoir has the lowest storage at 33% of average, only 8% of capacity as a result of being drafted from last year's extremely dry summer and high irrigation demand. Coeur d'Alene Lake is also low at only 21% of average, 11% of its summer storage level due to extremely low precipitation amounts thus far this water year. With all reservoirs and lakes in Idaho storing less water this year, we will not be relying upon reservoir storage as we have the past few years, and will rely on Mother Nature to bring adequate moisture for the numerous water uses in Idaho. Note: NRCS reports reservoir information in terms of usable volumes, which includes both active, inactive and in some cases dead storage. Other operators may report reservoir contents in different terms. For additional information, see the reservoir definitions in this report.

STREAMFLOW

Above normal precipitation in October helped recharge soil moisture and generate above normal monthly streamflow volumes. As a result of the below normal moisture in November and December, streamflow volumes were also below normal, ranging from 50-90% of average for most basins in the state. Current streamflow forecasts call for below normal runoff volumes across the state. The lowest forecasts are 55% of average for the Owyhee River and 70% in northern and central Idaho. The highest forecasts are for 90% of average in the headwaters of the upper Snake basin.

RECREATION

River runners looking to submit their applications for Idaho's lottery permit rivers may wish they had another month or two to decide which launch dates to put on their applications. With more than half the snow season still to come, snowpack and streamflow conditions can still improve for the better. The snowpack currently ranges from 50-75% of average for the Salmon basin north; streamflow forecasts range from 70-90% of average. Based upon current conditions, river runners can expect a shorter high water season and summer baseflow levels to occur earlier than normal. Stay tuned and keep your eye on the snowpack as river runners and farmers know the weather can change in short notice!

Mother Nature brought a series of storms just prior to Christmas to improve winter recreation activities for the holidays; however, more snow is needed throughout the state for skiers and snowmobilers to enjoy! Many snow surveyors report the snowpack has few snow layers in it, and if you get off the groomed trails you'll sink to the ground.

NEW SNOW DEPTH RECREATION REPORT AVAILABLE ON OUR WEB PAGE!

Over the past four years we have installed, with our cooperators support, about 30 snow depth sensors at SNOTEL sites throughout the state. The Idaho Snow Depth Recreation Report is available at the following location and summarizes much of the information available on our Snow Recreation Web page:

<http://idsnow.id.nrcs.usda.gov/snow/recreation.html>

This report is updated manually on Wednesday and Friday mornings. It provides current depth, average depth, percent of average, density of snowpack, one-day and five-day change in snow depth, and the previous day's maximum and minimum air temperature.

The snow depth data provides another piece of information about the snowpack and conditions that users can easily interpret. This new sensor allows us to determine new snowfall amounts rather than estimating, determine density to monitor when the snow is ripe and ready to melt, and provides another parameter to use as verification of the snow at our remote automated weather stations. The report is designed to assist backcountry skiers and snowmobilers in determining current snow conditions for the coming weekend. The most current SNOTEL data (from one to three hours old) is also available on this web page. Check it out, and let us know if you have any suggestions.

IDAHO SURFACE WATER SUPPLY INDEX (SWSI) As of January 1, 2001

The Surface Water Supply Index (SWSI) is a predictive indicator of surface water availability within a watershed for the spring and summer water use season. The index is calculated by combining pre-runoff reservoir storage (carryover) with forecasts of spring and summer streamflow. SWSI values are scaled from +4.1 (abundant supply) to -4.1 (extremely dry), with a value of zero indicating a median water supply as compared to historical occurrences.

SWSI values are published January through May and provide a more comprehensive outlook of water availability than either streamflow forecasts or reservoir storage figures alone. The SWSI index allows comparison of water availability between basins for drought or flood severity analysis. Threshold SWSI values have been established for most basins to indicate the potential for agricultural water shortages.

The following agencies and cooperators provide assistance in the preparation of the Surface Water Supply Index for Idaho:

US National Weather Service
US Bureau of Reclamation
Idaho Water Users Association

US Army Corps of Engineers
Idaho Dept. of Water Resources
PacifiCorp

<i>BASIN or REGION</i>	<i>SWSI Value</i>	<i>Most Recent Year With Similar SWSI Value</i>	<i>Agricultural Water Supply Shortage May Occur When SWSI is Less Than</i>
PANHANDLE	-2.2	1995	NA
SALMON	-1.0	1995	NA
WEISER	-1.6	1988	NA
PAYETTE	-1.5	1990	NA
BOISE	-1.5	1973	-2.6
BIG WOOD	-1.3	1981	-1.4
LITTLE WOOD	-0.8	1976	-2.1
BIG LOST	-1.7	1987	-0.8
LITTLE LOST	-0.7	1996	0.0
HENRYS FORK	-1.3	1981	-3.3
SNAKE (AMERICAN FALLS)	0.7	1968	-2.0
OAKLEY	0.3	1995	0.0
SALMON FALLS	-0.4	1988	0.0
BRUNEAU	-1.1	1985	NA
OWYHEE	-0.9	1994	NA
BEAR RIVER	-1.6	1981	-3.8

SWSI SCALE, PERCENT CHANCE OF EXCEEDANCE, AND INTERPRETATION

-4	-3	-2	-1	0	1	2	3	4
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99%	87%	75%	63%	50%	37%	25%	13%	1%

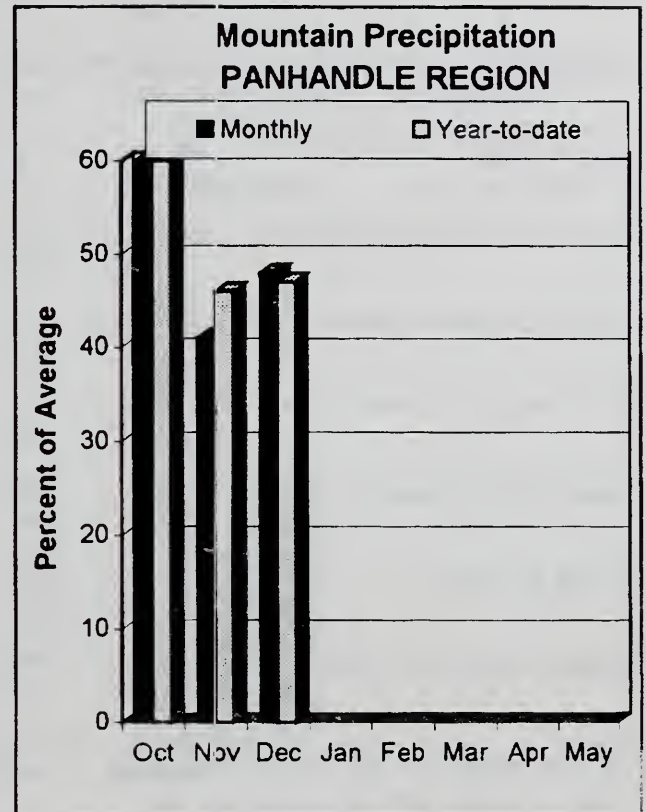
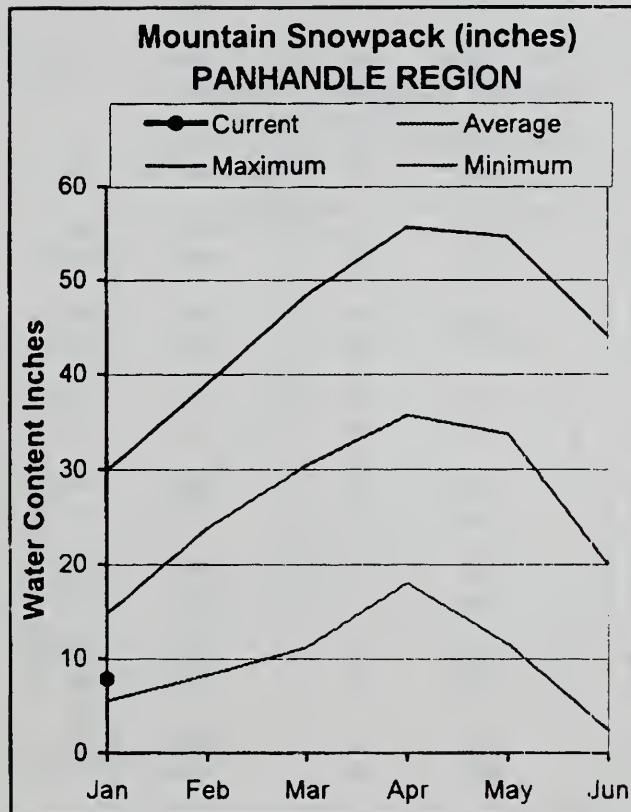
Much	Below	Near Normal				Above	Much	
Below	Normal	Water Supply				Normal	Above	

Note: The Percent Chance of Exceedance is an indicator of how often a range of SWSI values might be expected to occur. Each SWSI unit represents about 12% of the historical occurrences. As an example of interpreting the above scale, the SWSI can be expected to be greater than -3.0, 87% of the time and less than -3.0, 13% of the time. Half the time, the SWSI will be below and half the time above a value of zero. The interval between -1.5 and +1.5 described as "Near Normal Water Supply," represents three SWSI units and would be expected to occur about one-third (36%) of the time.

BASIN - WIDE SNOWPACK SUMMARY
JANUARY 2001

BASIN	NUMBER OF DATA SITES	PERCENT OF LAST YEAR	PERCENT OF AVERAGE
PANHANDLE REGION			
Kootenai ab Bonners Ferry	13	56%	51%
Moyie River	6	66%	54%
Priest River	4	67%	64%
Pend Oreille River	65	71%	63%
Rathdrum Creek	4	66%	86%
Hayden Lake	0	0%	0%
Coeur d'Alene River	5	69%	61%
St. Joe River	3	59%	53%
Spokane River	11	65%	66%
Palouse River	1	78%	98%
CLEARWATER RIVER BASIN			
North Fork Clearwater	9	58%	60%
Lochsa River	3	71%	67%
Selway River	4	65%	70%
Clearwater Basin Total	16	61%	64%
SALMON RIVER BASIN			
Salmon River ab Salmon	8	95%	63%
Lemhi River	5	90%	77%
Middle Fork Salmon River	3	77%	53%
South Fork Salmon River	3	72%	59%
Little Salmon River	4	75%	57%
Salmon Basin Total	23	81%	64%
WEISER, PAYETTE, BOISE RIVER BASINS			
Mann Creek	1	89%	67%
Weiser River	3	88%	62%
North Fork Payette	8	77%	68%
South Fork Payette	4	96%	55%
Payette Basin Total	13	89%	67%
Middle & North Fork Boise	6	108%	69%
South Fork Boise River	8	149%	73%
Mores Creek	4	147%	111%
Boise Basin Total	14	141%	81%
Canyon Creek	2	247%	80%
WOOD AND LOST RIVER BASINS			
Big Wood ab Magic	8	128%	70%
Camas Creek	4	237%	75%
Big Wood Basin Total	11	152%	72%
Little Wood River	4	152%	59%
Fish Creek	0	0%	0%
Big Lost River	5	187%	73%
Little Lost River	3	128%	77%
Birch-Medicine Lodge Creeks	2	126%	95%
UPPER SNAKE RIVER BASIN			
Camas-Beaver Creeks	4	126%	64%
Henry's Fork-Falls River	10	94%	70%
Teton River	7	125%	86%
Henry's Fork above Rexburg	17	106%	76%
Snake above Jackson Lake	9	107%	71%
Gros Ventre River	2	149%	80%
Hoback River	5	139%	80%
Greys River	3	129%	80%
Salt River	3	137%	89%
Snake above Palisades	21	121%	77%
Willow Creek	7	145%	106%
Blackfoot River	3	134%	88%
Portneuf River	2	147%	72%
Snake abv American Falls Resv	31	127%	81%
SOUTHSIDE SNAKE RIVER BASINS			
Raft River	1	145%	95%
Goose-Trapper Creeks	3	165%	95%
Salmon Falls Creek	6	153%	101%
Bruneau River	5	139%	95%
Owyhee Basin Total	8	159%	82%
BEAR RIVER BASIN			
Smiths & Thomas Forks	3	157%	90%
Bear River ab WY-ID line	10	170%	79%
Montpelier Creek	1	126%	62%
Mink Creek	1	166%	82%
Cub River	1	158%	87%
Bear River ab ID-UT line	15	167%	80%
Malad River	1	190%	111%

PANHANDLE REGION JANUARY 1, 2001



WATER SUPPLY OUTLOOK

December precipitation in this region was 48% of average. Bear Mountain SNOTEL site, located at 5,400 feet and 10 miles north of Clark Fork, only received 5.2 inches of precipitation in December. Normal is 15.2 inches! Precipitation in the Panhandle Region since October 1 is the lowest in the state at 47% of average. This is quite the contrast from last year when near normal precipitation was received October-June. In August conditions changed for the worst with only 8% of the normal precipitation falling. September brought early snows and 145% of average precipitation. The Panhandle snowpack is also the lowest in the state ranging from 50-65% of average. Many high elevation snow measuring sites are reporting near their minimum January 1 snow water content levels since records started 20 years ago; however, low elevation sites are reporting normal or slightly above normal water content levels. A four-site snow index for the St. Joe River basin shows the snowpack is the 3rd lowest since 1961; only years 1977 and 1988 had less snow on January 1. The lack of moisture is also affecting storage in Coeur D'Alene Lake, which is only 21% of average and 11% of its normal summer level. Streamflow forecasts are low for this area, ranging from 70-85% of average. It is too early to raise a "red flag" as conditions can still change, but it will be difficult to make-up the huge moisture deficit with a little more than half the snow season still to come. Users who rely on snow and water will want to watch the weather very closely the next few months.

PANHANDLE REGION
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
KOOTENAI at Leonia (1,2)	APR-JUL	3514	4811	5400	75	5989	7286	7199
	APR-SEP	4178	5575	6210	75	6845	8242	8275
MOYIE RIVER at Eastport	APR-JUL	195	255	296	71	337	397	415
	APR-SEP	203	266	308	72	350	413	430
SMITH CREEK	APR-JUL	67	85	97	81	109	127	120
	APR-SEP	69	89	102	81	115	135	126
BOUNDARY CREEK	APR-JUL	65	82	93	78	104	121	119
	APR-SEP	69	86	98	78	110	127	125
CLARK FK at Whitehorse Rpds (1,2)	APR-JUL	3499	6890	8430	72	9970	13361	11730
	APR-SEP	3853	7585	9280	72	10975	14707	12910
PEND OREILLE Lake Inflow (2)	APR-JUL	5085	7559	9240	70	10921	13395	13150
	APR-SEP	4209	7717	10100	70	12483	15991	14370
PRIEST near Priest River (1,2)	APR-JUL	359	501	565	70	629	771	812
	APR-SEP	391	539	607	70	675	823	865
COEUR D'ALENE at Enaville	APR-JUL	388	514	600	78	686	812	769
	APR-SEP	409	540	630	78	720	851	809
ST. JOE at Calder	APR-JUL	651	835	960	82	1085	1269	1169
	APR-SEP	675	863	990	80	1117	1305	1237
SPOKANE near Post Falls (2)	APR-JUL	1290	1784	2120	81	2456	2950	2627
	APR-SEP	1326	1834	2180	80	2526	3034	2720
SPOKANE at Long Lake (2)	APR-JUL	1359	1997	2430	84	2863	3501	2905
	APR-SEP	1478	2150	2607	83	3064	3736	3128

PANHANDLE REGION Reservoir Storage (1000 AF) - End of December					PANHANDLE REGION Watershed Snowpack Analysis - January 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HUNGRY HORSE	3451.0	2520.0	2903.0	2586.0	Kootenai ab Borners Ferry	13	56	51
FLATHEAD LAKE	1791.0	989.4	981.0	1305.0	Moyie River	6	66	54
NOXON RAPIDS	335.0	317.9	307.5	317.1	Priest River	4	67	64
PEND OREILLE	1561.3	729.1	715.0	722.0	Pend Oreille River	65	71	63
COEUR D'ALENE	238.5	27.0	111.5	130.5	Rathdrum Creek	4	66	86
PRIEST LAKE	119.3	50.0	60.0	55.3	Hayden Lake	0	0	0
					Coeur d'Alene River	5	62	61
					St. Joe River	3	59	53
					Spokane River	11	62	66
					Palouse River	1	78	98

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

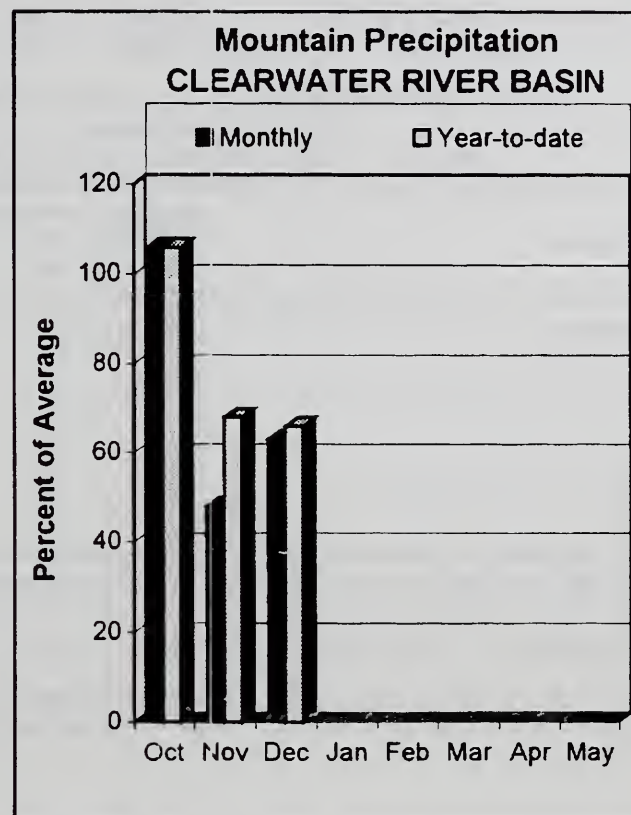
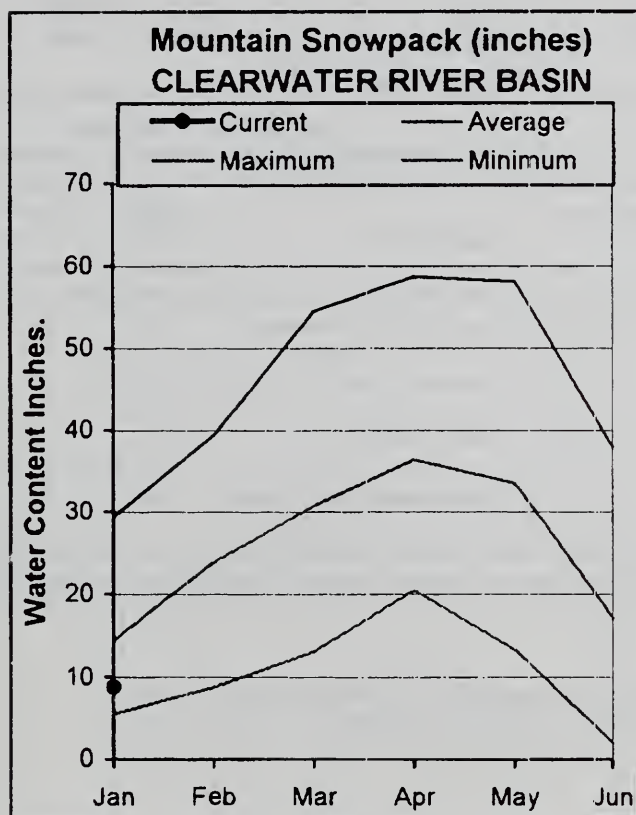
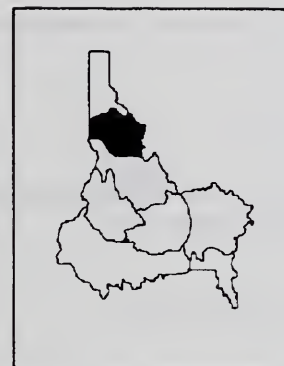
The average is computed for the 1961-1990 base period.

(1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.

(2) - The value is natural flow - actual flow may be affected by upstream water management.

CLEARWATER RIVER BASIN

JANUARY 1, 2001



WATER SUPPLY OUTLOOK

The basin received normal precipitation in October, half of normal in November, and 63% of normal in December. Water year to date precipitation is 2/3s of normal. Snowpack percentages range from 60-70% of average across the Clearwater basin with the lowest amounts in the North Fork Clearwater basin. Snow water content levels in the Clearwater basin are the 5th lowest since measurements started, so there is definitely room for improvement during the second half of the winter season. Dworshak Reservoir is 63% of capacity, 92% of average. Dworshak Reservoir inflow forecast calls for 85% of average. Streamflow forecasts for the Clearwater River at Spalding is for 87% of average. The water supply outlook for this area can still improve with above normal precipitation the next few months.

CLEARWATER RIVER BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)		=====		
		90% (1000AF)	70% (1000AF)	30% (1000AF)	10% (1000AF)			
DWRSHAK RESV INFLOW (1,2)	APR-JUL	1316	1993	2300	86	2607	3284	2687
	APR-SEP	1115	2136	2450	86	2764	3744	2858
CLEARWATER at Orofino (1)	APR-JUL	2684	3706	4170	88	4634	5656	4729
	APR-SEP	2096	3922	4400	88	4878	6737	4990
CLEARWATER at Spalding (1,2)	APR-JUL	3047	5967	6780	89	7593	10513	7618
	APR-SEP	4510	6339	7170	89	8001	9830	8051

CLEARWATER RIVER BASIN Reservoir Storage (1000 AF) - End of December					CLEARWATER RIVER BASIN Watershed Snowpack Analysis - January 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of =====	
		This Year	Last Year	Avg			Last Yr	Average
DWRSHAK	3468.0	2199.2	2478.0	2396.0	North Fork Clearwater	9	58	60
					Lochsa River	3	71	67
					Selway River	4	65	70
					Clearwater Basin Total	16	61	64

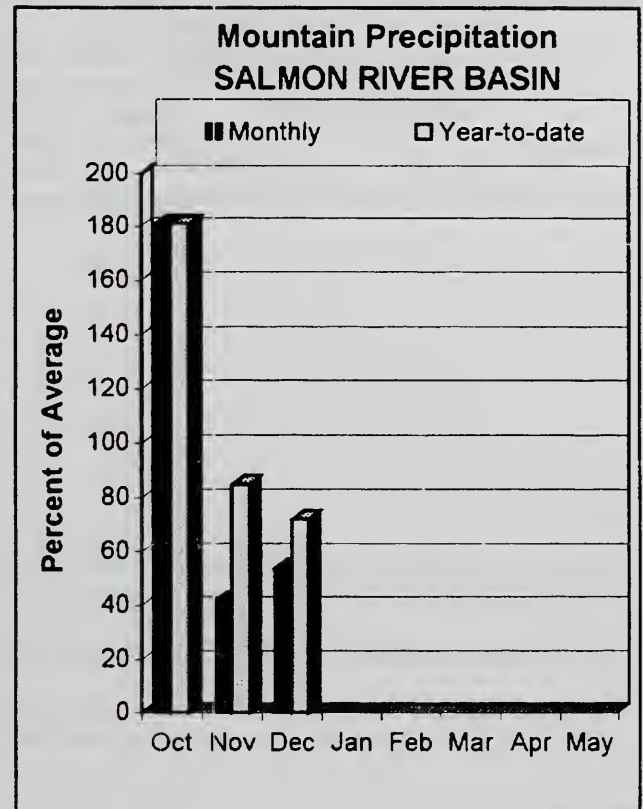
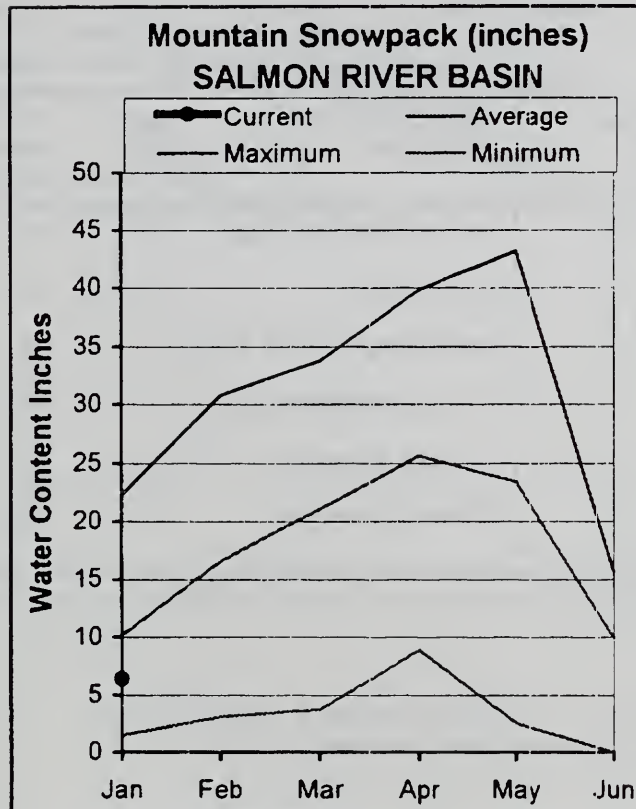
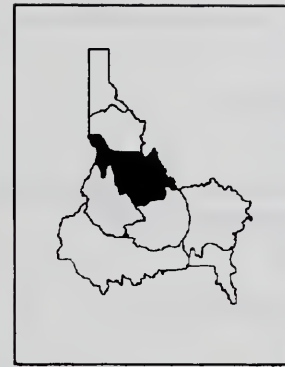
* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

The average is computed for the 1961-1990 base period.

- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

SALMON RIVER BASIN

JANUARY 1, 2001



WATER SUPPLY OUTLOOK

After a long fire season in the Salmon River basin, Mother Nature brought precipitation that was 136% of average in September to help put them out. October precipitation was even better at 181% of average; however, a dry spell occurred with November and December each bringing about half of the 30-year normal precipitation amounts. Water year to date precipitation stands at 72% of average and is the lowest since 1994. The snowpack ranges from 77% of average in the Lemhi River basin to 53% in the Middle Fork Salmon River basin, which is the 5th lowest since 1963. Overall, the Salmon River basin is 64% of average. These percentages are about 5-10 percentage points higher than on January 1, 1994, which was the end of the drought years. The Salmon River above Salmon is forecast at 81% of average while the Salmon River at White Bird is forecast at 87%. River runners looking to submit their application for the lottery-drawn launch dates can expect a shorter high water season and summer baseflow levels to occur earlier than normal based on current conditions. Stay tuned and keep your eye on the snowpack as conditions can still improve with more than half the snow season still to come!

SALMON RIVER BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg. (1000AF)
		=====		Chance Of Exceeding %		=====		
		90%	70%	50% (Most Probable)		30%	10%	
		(1000AF)	(1000AF)	(1000AF)	(% AVG.)	(1000AF)	(1000AF)	
SALMON at Salmon (1)	APR-JUL	376	602	705	81	808	1034	869
	APR-SEP	306	713	825	81	937	1345	1019
SALMON at White Bird (1)	APR-JUL	3237	4573	5180	87	5787	7123	5956
	APR-SEP	3169	5079	5740	87	6401	8319	6602

SALMON RIVER BASIN Reservoir Storage (1000 AF) - End of December					SALMON RIVER BASIN Watershed Snowpack Analysis - January 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of =====	
		This Year	Last Year	Avg			Last Yr	Average
					Salmon River ab Salmon	8	95	63
					Lemhi River	5	90	77
					Middle Fork Salmon River	3	77	53
					South Fork Salmon River	3	72	59
					Little Salmon River	4	75	57
					Salmon Basin Total	23	81	64

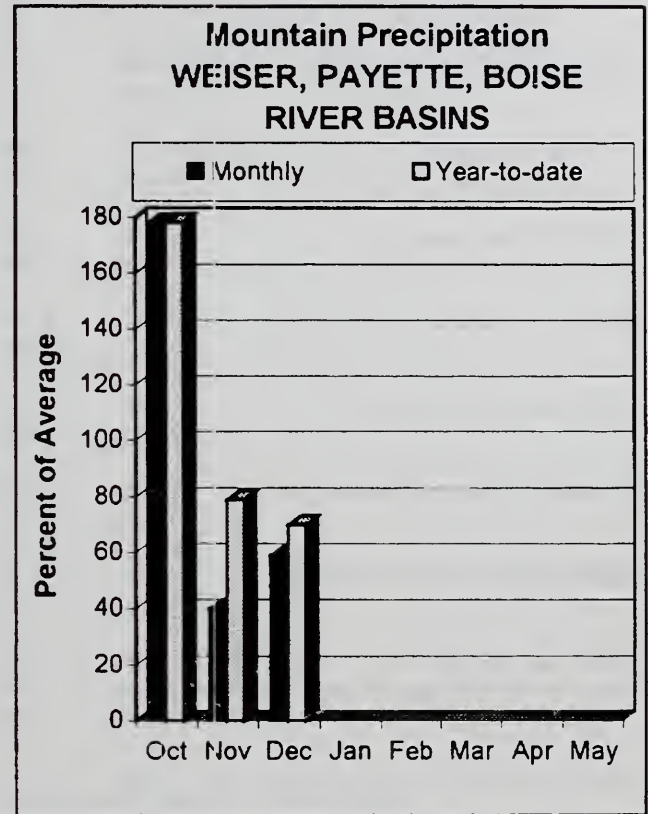
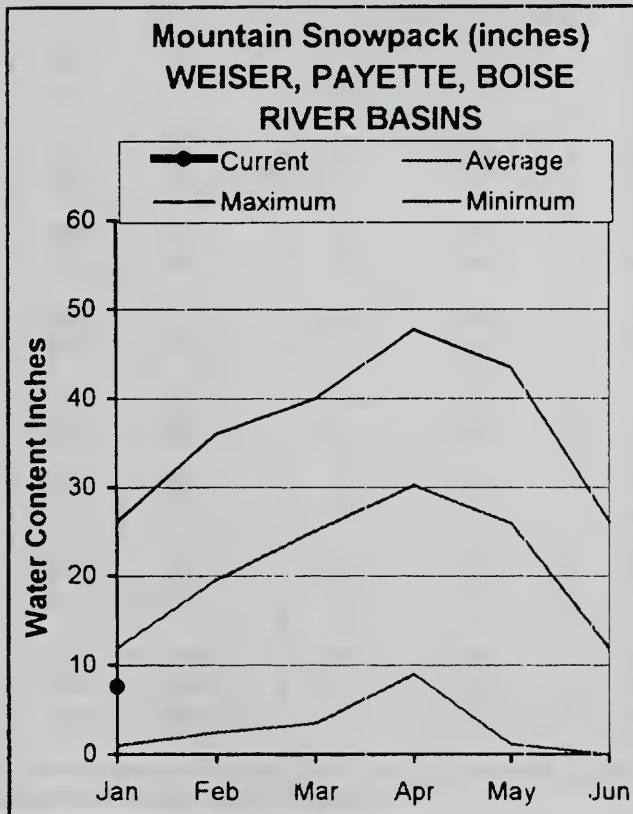
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The average is computed for the 1961-1990 base period.

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WEISER, PAYETTE, BOISE RIVER BASINS JANUARY 1, 2001



WATER SUPPLY OUTLOOK

December precipitation was 58% of average. Precipitation for the water year is 70% of average. Low elevation snow measuring stations are reporting near normal or better snowpacks; however, the higher elevation snow sites, which store much larger volumes of water in the snow, are only in the 50-70% of average range. Overall, the snowpack is about 65% of average in the Weiser and Payette basins and 81% of average in the Boise basin. Reservoir storage is average in the Payette Reservoir system and 82% of average in the Boise Reservoir system. Streamflow forecasts call for 79% of average for the Boise River near Boise, 72% for the Payette River near Horseshoe Bend, and 78% for the Weiser River. Water supplies may be marginal. Above normal precipitation is needed the next few months to ensure adequate water supplies.

WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<===== Drier ===== Future Conditions ===== Wetter =====>						
		Chance Of Exceeding *:					30-Yr Avg. (1000AF)	30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
WEISER near Weiser (1)	APR-SEP	54	241	315	76	389	581	415
SF PAYETTE at Lowman	APR-JUL	194	279	336	78	393	478	432
	APR-SEP	230	320	382	78	444	534	488
DEADWOOD RESERVOIR Inflow (1,2)	APR-JUL	56	88	103	76	118	150	135
	APR-SEP	57	91	106	74	121	155	143
LAKE FORK PAYETTE near McCall	APR-JUL	47	59	67	79	75	86	84
	APR-SEP	49	61	69	79	78	90	88
NF PAYETTE nr Cascade (1,2)	APR-JUL	149	295	362	73	429	575	496
	APR-SEP	173	329	400	75	471	627	533
NF PAYETTE nr Banks (2)	APR-JUL	246	381	473	73	565	700	648
	APR-SEP	266	408	504	73	600	742	690
PAYETTE nr Horseshoe Bend (1,2)	APR-JUL	484	952	1165	72	1378	1846	1618
	APR-SEP	561	1055	1280	73	1505	1999	1755
BOISE near Twin Springs (1)	APR-JUL	278	445	520	82	595	762	631
	APR-SEP	295	470	550	80	630	805	686
SF BOISE at Anderson Ranch Dam (1,2)	APR-JUL	202	362	435	80	508	668	544
	APR-SEP	215	382	458	79	534	701	582
MORES CREEK near Arrowrock Dam	APR-JUL	78	107	126	98	145	174	129
	APR-SEP	82	111	131	98	151	180	134
BOISE near Boise (1,2)	APR-JUN	506	842	994	79	1146	1482	1264
	APR-JUL	533	934	1116	79	1298	1699	1421
	APR-SEP	603	1023	1213	79	1403	1823	1535

WEISER, PAYETTE, BOISE RIVER BASINS Reservoir Storage (1000 AF) - End of December					WEISER, PAYETTE, BOISE RIVER BASINS Watershed Snowpack Analysis - January 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MANN CREEK	11.1	1.2	1.7	3.6	Mann Creek	1	89	67
CASCADE	693.2	414.3	483.3	420.4	Weiser River	3	88	62
DEADWOOD	161.9	92.5	115.6	73.5	North Fork Payette	8	77	68
ANDERSON RANCH	450.2	281.5	370.3	306.5	South Fork Payette	4	96	55
ARROWROCK	272.2	92.1	140.5	184.3	Payette Basin Total	13	89	67
LUCKY PEAK	293.2	103.8	103.3	89.3	Middle & North Fork Boise	6	108	69
LAKE LOWELL (DEER FLAT)	165.2	98.4	103.9	113.7	South Fork Boise River	8	149	73
					Mores Creek	4	147	111
					Boise Basin Total	14	141	81
					Canyon Creek	2	247	80

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

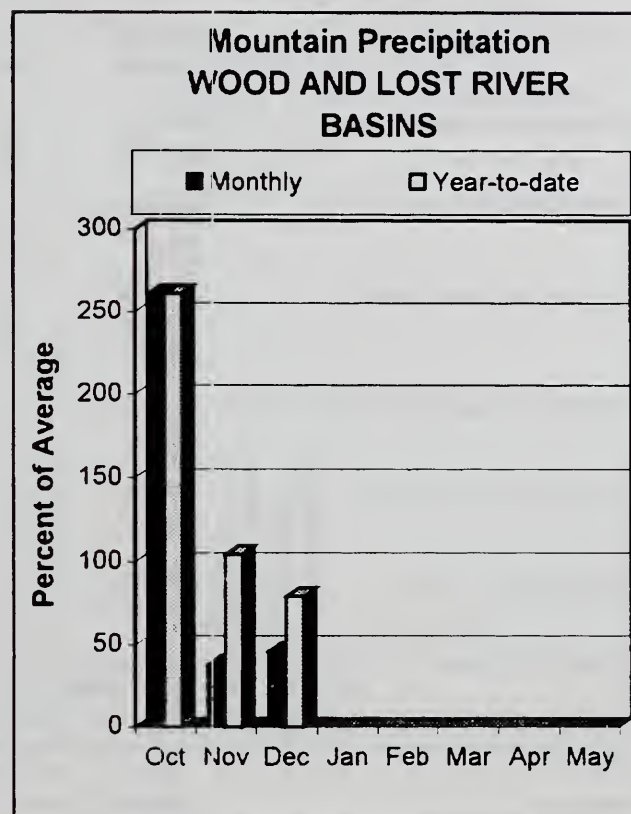
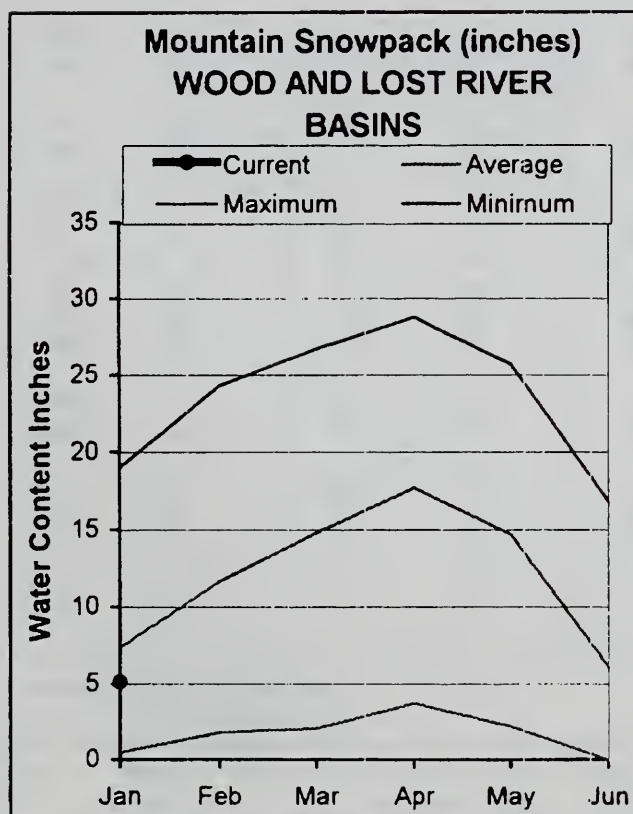
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WOOD and LOST RIVER BASINS

JANUARY 1, 2001



WATER SUPPLY OUTLOOK

December precipitation was 46% of average, the lowest in the state. Precipitation for the water year stands at only 79% of average. The snowpack is 58% in the Little Wood, 72% for the Big Wood and Big Lost basins, 77% for the Little Lost and 95% in the Birch-Medicine Lodge drainages. Reservoir storage remains low with Magic Reservoir 20% full, 47% of average; Little Wood 38% full, 85% of average; and Mackay 32% full, 55% of average. Streamflow forecasts range from 65-80% of average for these central Idaho streams. Water users should be prepared for possible shortages, especially if future precipitation is below normal.

WOOD AND LOST RIVER BASINS
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>						30-Yr Avg. (1000AF)
		===== Chance Of Exceeding "=====						
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BIG WOOD at Hailey (1)	APR-JUL	83	166	204	80	242	325	255
	APR-SEP	72	183	225	78	267	384	289
BIG WOOD near Bellevue	APR-JUL	40	96	135	74	174	230	183
	APR-SEP	48	106	146	74	186	244	197
CAMAS CREEK near Blaine	APR-JUL	35	60	80	78	103	143	102
	APR-SEP	36	61	81	79	104	144	103
BIG WOOD below Magic Dam (2)	APR-JUL	86	169	225	76	281	364	295
	APR-SEP	88	172	230	74	288	372	310
LITTLE WOOD near Carey (2)	MAR-JUL	12.0	45	67	67	89	122	100
	MAR-SEP	14.0	48	71	66	94	128	108
BIG LOST at Howell Ranch	APR-JUN	56	86	106	75	126	156	141
	APR-JUL	67	109	138	76	167	209	181
	APR-SEP	79	125	157	76	189	235	206
BIG LOST below Mackay Reservoir (2)	APR-JUL	37	78	106	70	134	175	152
	APR-SEP	56	101	131	71	161	206	184
LITTLE LOST blw Wet Creek	APR-JUL	16.5	22	25	82	29	34	31
	APR-SEP	21	28	32	82	37	43	39
LITTLE LOST nr Howe	APR-JUL	20	24	27	82	30	34	33
	APR-SEP	26	31	35	81	39	44	43

WOOD AND LOST RIVER BASINS Reservoir Storage (1000 AF) - End of December					WOOD AND LOST RIVER BASINS Watershed Snowpack Analysis - January 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
MAGIC	191.5	38.5	95.8	82.1	Big Wood ab Magic	8	128	70
LITTLE WOOD	30.0	11.3	14.7	13.3	Camas Creek	4	237	75
MACKAY	44.4	14.0	25.6	25.4	Big Wood Basin Total	11	152	72
					Little Wood River	4	152	59
					Fish Creek	0	0	0
					Big Lost River	5	187	73
					Little Lost River	3	128	77
					Birch-Medicine Lodge Cree	2	126	95

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

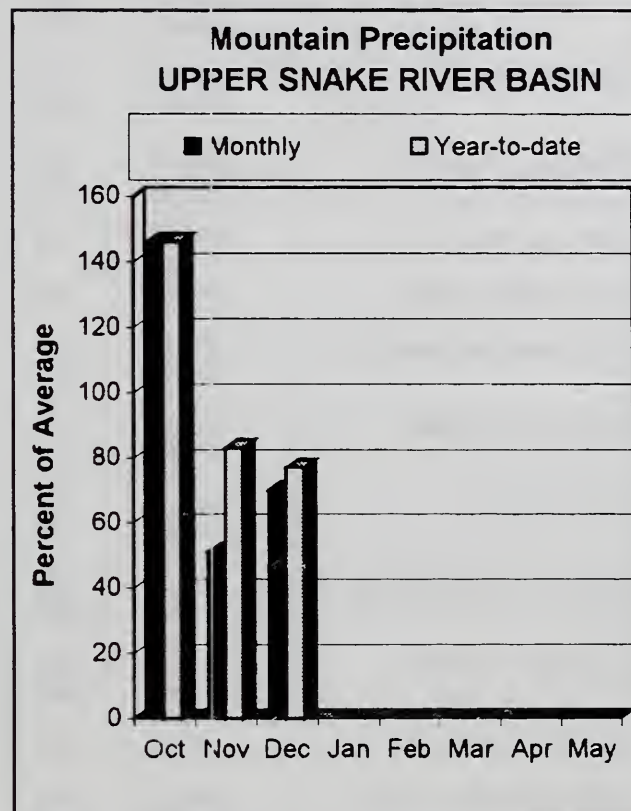
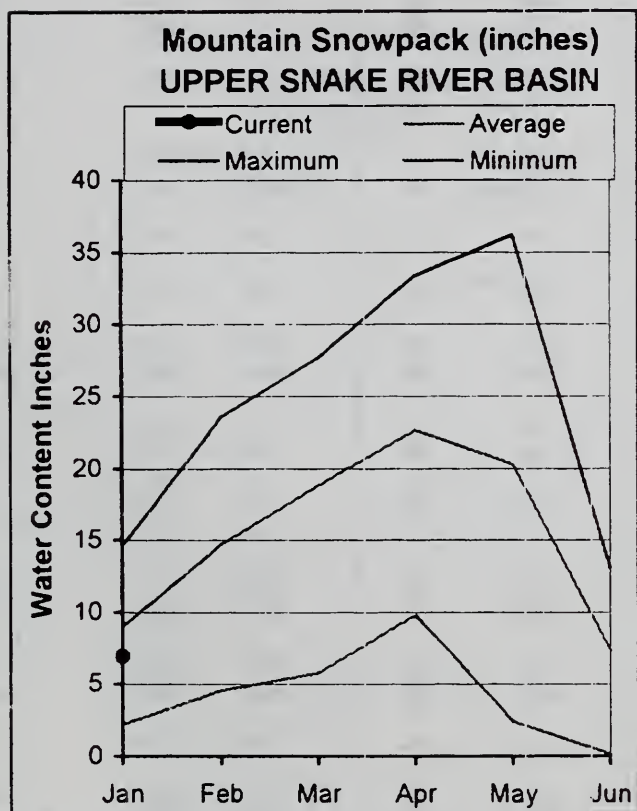
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UPPER SNAKE RIVER BASIN

JANUARY 1, 2001



WATER SUPPLY OUTLOOK

December precipitation was 70% of average. Water year to date precipitation is slightly better at 77% of average. Snowpack percentages range from 70% of average in the headwaters of the Henrys Fork to 100% in the Willow basin. Overall, the snowpack is 81% of average for the upper Snake River basin. The 8 major reservoirs in the upper Snake system are 86% of average, 55% full. This is about 3/4s the volume of last year at this time. However, Palisades Reservoir is only 41% full. Streamflow forecasts call for 75-90% of average in the basin. With more than half the winter still to come, conditions can still improve with normal or better precipitation the next few months.

UPPER SNAKE RIVER BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<==== Drier ===== Future Conditions ===== Wetter =====>						30-Yr Avg. (1000AF)				
		90% (1000AF)		70% (1000AF)		Chance Of Exceeding * 50% (Most Probable) (1000AF) (% AVG.)			30% (1000AF)		10% (1000AF)	
HENRYS FORK near Ashton (2)	APR-JUL	367	422	460	85	498	553	544				
	APR-SEP	510	576	620	85	664	730	730				
HENRYS FORK near Rexburg (2)	APR-JUL	760	930	1046	85	1162	1332	1228				
	APR-SEP	997	1189	1320	85	1451	1643	1551				
FALLS near Squirrel (1,2)	APR-JUL	239	298	325	89	352	411	364				
	APR-SEP	291	359	389	90	419	487	432				
TETON near Driggs	APR-JUL	98	128	149	98	170	200	152				
	APR-SEP	133	170	195	98	220	257	199				
TETON near St. Anthony	APR-JUL	216	280	324	86	368	432	377				
	APR-SEP	272	345	395	86	445	518	457				
SNAKE near Moran (1,2)	APR-SEP	519	681	755	87	829	991	869				
PACIFIC CREEK at Moran	APR-SEP	106	132	150	90	168	194	166				
SNAKE above Palisades (2)	APR-JUL	1569	1873	2079	90	2285	2589	2311				
	APR-SEP	1829	2170	2402	90	2634	2975	2671				
GREYS above Palisades	APR-JUL	190	249	290	87	331	390	333				
	APR-SEP	230	295	340	88	385	450	388				
SALT near Etna	APR-JUL	153	223	270	85	317	387	319				
	APR-SEP	211	291	345	87	399	479	399				
PALISADES RESERVOIR INFLOW (1,2)	APR-JUL	1865	2524	2823	88	3122	3781	3226				
	APR-SEP	2222	2963	3300	88	3637	4378	3763				
SNAKE near Heise (2)	APR-JUL	2216	2692	3016	87	3340	3816	3451				
	APR-SEP	2617	3161	3530	87	3899	4443	4049				
BLACKFOOT RESV INFLOW	APR-JUN	17.0	50	73	65	96	129	113				
SNAKE nr Blackfoot (1,2)	APR-JUL	2266	3304	3775	85	4246	5284	4444				
	APR-SEP	2985	4149	4677	85	5205	6369	5482				
PORTNEUF at Topaz	MAR-JUL	44	57	66	76	74	87	86				
	MAR-SEP	55	71	81	76	91	107	107				
AMERICAN FALLS RESV INFLOW (1,2)	APR-JUL	644	1885	2360	77	2835	4078	3066				
	APR-SEP	850	2019	2550	77	3081	4250	3303				

UPPER SNAKE RIVER BASIN
Reservoir Storage (1000 AF) - End of December

UPPER SNAKE RIVER BASIN
Watershed Snowpack Analysis - January 1, 2001

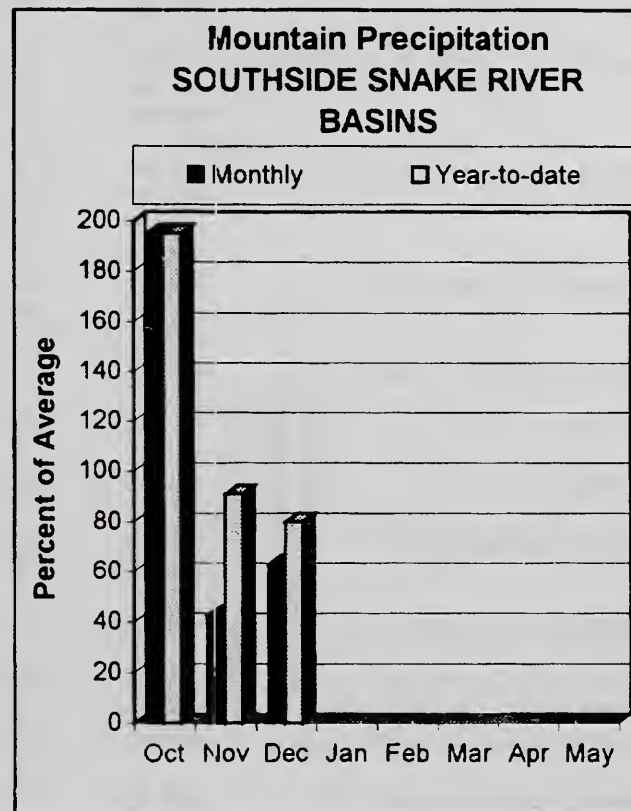
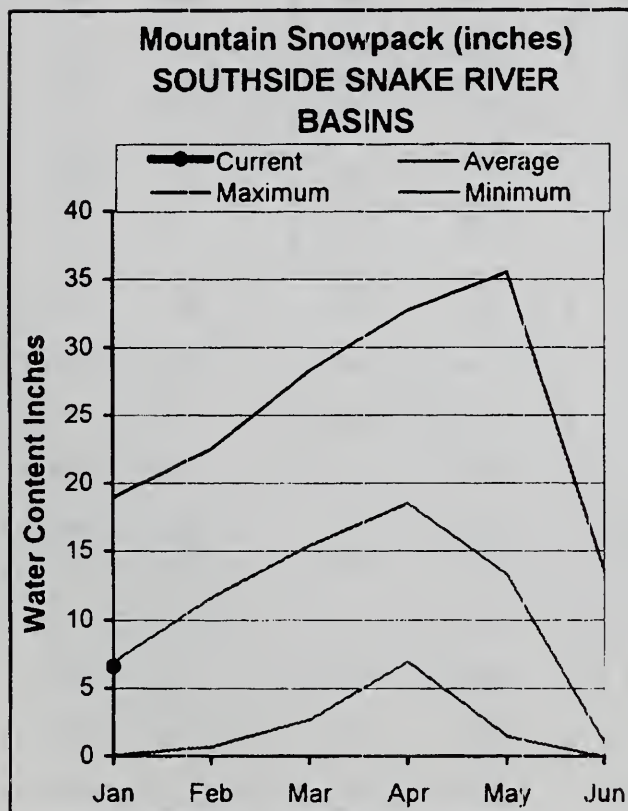
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
HENRYS LAKE	90.4	84.0	88.9	77.4	Camas-Beaver Creeks	4	126	64
ISLAND PARK	135.2	107.9	112.1	89.4	Henrys Fork-Falls River	10	94	70
GRASSY LAKE	15.2	12.6	12.2	10.5	Teton River	7	125	86
JACKSON LAKE	847.0	637.6	632.3	470.2	Henrys Fork above Rexburg	17	106	76
PALISADES	1400.0	575.0	1173.0	1036.0	Snake above Jackson Lake	9	107	71
RIRIE	80.5	39.4	39.3	33.8	Gros Ventre River	2	149	80
BLACKFOOT	348.7	195.6	269.8	227.7	Hoback River	5	139	80
AMERICAN FALLS	1672.6	854.9	1172.5	974.0	Greys River	3	129	80
					Salt River	3	137	89
					Snake above Palisades	21	121	77
					Willow Creek	7	145	106
					Blackfoot River	3	134	88
					Portneuf River	2	147	72
					Snake abv American Falls	31	127	81

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table. The average is computed for the 1961-1990 base period.

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(2) - The value is natural flow - actual flow may be affected by upstream water management.

SOUTHSIDE SNAKE RIVER BASINS JANUARY 1, 2001



WATER SUPPLY OUTLOOK

After an extremely dry summer, the new water year started with 195% of average precipitation in October. In November, temperatures cooled and so did the precipitation. November precipitation was only 43% of average and increased slightly to 63% in December. These basins host the best snowpacks in the state. Similarly, Pomerelle Ski Area is reporting a 45-65 inch base, the deepest of any Idaho ski resort. The Owyhee basin snowpack is the lowest at 82% of average while Salmon Falls basin is the best at 101% of average. Elsewhere in this area, the snowpack is very consistent at 95% of average. Salmon Falls Reservoir was severely drafted last summer. Current storage is only 8% of capacity, 33% of average. Oakley Reservoir fairs slightly better at 29% of capacity, 96% of average, while Owyhee Reservoir is 35% full. Streamflow forecasts range from 50% of average in the Owyhee basin to 88% for Salmon Falls Creek. A near normal snowpack on April 1 is needed to provide adequate irrigation water in the Oakley and Salmon Falls basin. Hopefully Mother Nature will cooperate with near normal moisture the next few months in order to maintain the current snow water content levels.

SOUTHSIDE SNAKE RIVER BASINS
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						
		=====		Chance Of Exceeding *		=====		30-Yr Avg. (1000AF)
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
OAKLEY RESV INFLOW	MAR-JUL	14.1	21	26	79	32	42	33
	MAR-SEP	15.5	23	28	78	34	44	36
OAKLEY RESV STORAGE	FEB-28	23	25	27	93	28	31	29
	MAR-31	27	30	32	96	34	37	33
	APR-30	30	34	36	96	39	43	38
SALMON FALLS CREEK nr San Jacinto	MAR-JUN	45	62	76	88	91	115	86
	MAR-JUL	46	65	79	87	95	121	91
	MAR-SEP	47	66	80	83	96	122	96
SALMON FALLS RESV STORAGE	FEB-28	17.3	21	24	43	26	30	55
	MAR-31	21	28	33	51	38	45	64
	APR-30	19.8	29	36	43	42	52	83
BRUNEAU near Hot Springs	MAR-JUL	126	171	205	87	243	304	235
	MAR-SEP	128	175	210	85	249	312	246
OWYHEE near Gold Creek (2)	MAR-JUL	7.5	16.1	22	70	28	37	31
OWYHEE nr Owyhee (2)	APR-JUL	6.2	37	58	67	79	110	86
OWYHEE near Rome	FEB-JUL	100	213	314	51	435	648	622
OWYHEE RESV INFLOW (2)	FEB-JUL	130	253	360	55	485	704	656
	FEB-SEP	143	268	376	55	502	721	684
SUCCOR CK nr Jordan Valley	FEB-JUL	0.2	6.5	11.3	70	16.1	23	16.2
SNAKE RIVER at King Hill (1,2)	APR-JUL	666		2060	71		3446	2896
SNAKE RIVER near Murphy (1,2)	APR-JUL	715		2130	72		3516	2980
SNAKE RIVER at Weiser (1,2)	APR-JUL	109		3230	59		6339	5465
SNAKE RIVER at Hells Canyon Dam (1,2)	APR-JUL	306		3730	61		7110	6129
SNAKE blw Lower Granite Dam (1,2)	APR-JUL	6327	13804	17200	79	20596	28073	21650

SOUTHSIDE SNAKE RIVER BASINS
Reservoir Storage (1000 AF) - End of December

SOUTHSIDE SNAKE RIVER BASINS
Watershed Snowpack Analysis - January 1, 2001

Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of	
		This Year	Last Year	Avg			Last Yr	Average
OAKLEY	74.5	21.6	34.9	22.6	Raft River	1	145	95
SALMON FALLS	182.6	15.4	53.5	46.7	Goose-Trapper Creeks	3	165	95
WILDHORSE RESERVOIR	71.5	35.0	46.0	30.5	Salmon Falls Creek	6	153	101
OWYHEE	715.0	251.2	426.4	421.0	Bruneau River	5	139	95
BROWNLEE	1419.3	1328.8	1363.5	1275.0	Owyhee Basin Total	8	159	82

* 90%, 70%, 30%, and 10% chances of exceeding are the probabilities that the actual flow will exceed the volumes in the table.

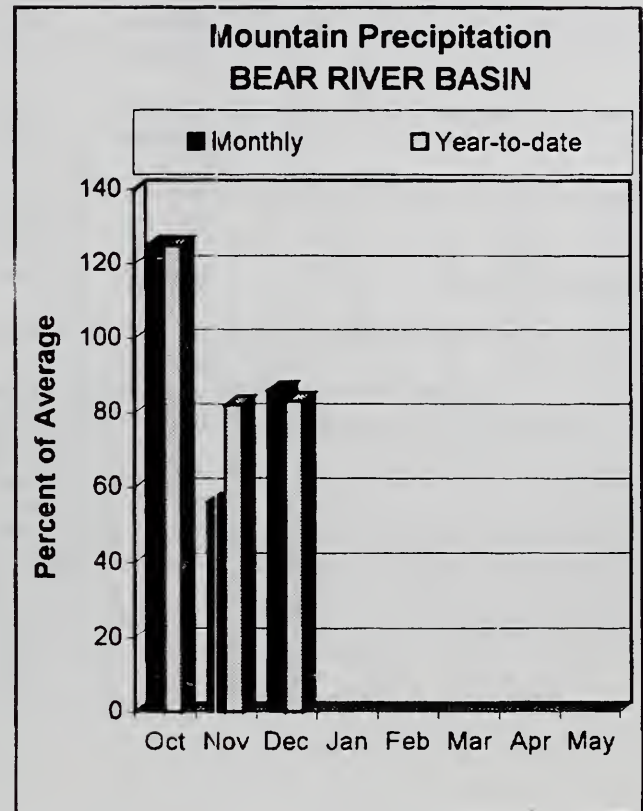
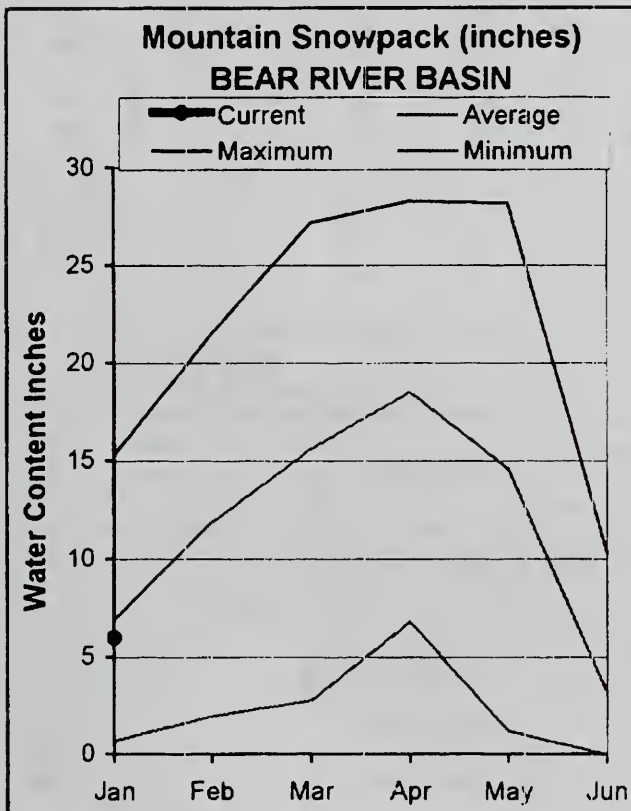
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BEAR RIVER BASIN

JANUARY 1, 2001



WATER SUPPLY OUTLOOK

December brought precipitation that was 86% of average, the best in the state. Precipitation since the water year started October 1 is 83% of average, also the best in the state. The best snowpacks in the West stretch from southern Idaho to southern Colorado and are near to slightly above normal levels. The snowpacks in the Bear River basin range from 80-90% of average. Streamflow forecasts range from 75% of average for Montpelier Creek to 89% for Cub River. The Bear River below Stewart Dam is forecast at 83% of average. Currently, Bear Lake's storage is 87% of average, and Montpelier Creek Reservoir is 71% of average. Even with below normal snow levels, Bear Lake water users should have an adequate water supply; however, other water users and winter recreationists are still hoping for more snow to fall in the remaining winter months.

BEAR RIVER BASIN
Streamflow Forecasts - January 1, 2001

Forecast Point	Forecast Period	<<===== Drier ===== Future Conditions ===== Wetter =====>>						30-Yr Avg (1000AF)
		=====		Chance Of Exceeding *		=====		
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	(% AVG.)	30% (1000AF)	10% (1000AF)	
BEAR R nr Randolph, UT	APR-JUL	15.0	63	95	81	127	175	118
	APR-SEP	16.0	67	102	80	137	188	127
SMITHS FK nr Border, WY	APR-JUL	49	67	84	82	105	144	102
	APR-SEP	58	79	97	82	119	162	118
THOMAS FK nr WY-ID State Line (Disc.	APR-JUL	11.1	17.6	24	73	33	52	33
	APR-SEP	12.4	19.3	26	72	35	54	36
BEAR R blw Stewart Dam nr Montpelier	APR-JUL	125	193	240	83	287	355	288
	APR-SEP	143	218	270	83	322	397	327
MONTPELIER CK nr Montpelier (Disc)(2	APR-JUL	5.2	7.3	9.3	76	11.8	16.7	12.2
	APR-SEP	6.5	8.7	10.6	75	12.9	17.2	14.2
CUB R nr Preston	APR-JUL	24	35	42	89	49	60	47

BEAR RIVER BASIN Reservoir Storage (1000 AF) - End of December					BEAR RIVER BASIN Watershed Snowpack Analysis - January 1, 2001			
Reservoir	Usable Capacity	*** Usable Storage ***			Watershed	Number of Data Sites	This Year as % of =====	
		This Year	Last Year	Avg			Last Yr	Average
BEAR LAKE	1421.0	858.8	1154.5	982.0	Smiths & Thomas Forks	3	157	90
MONTPELIER CREEK	4.0	1.2	2.7	1.7	Bear River ab WY-ID line	4	152	85
					Montpelier Creek	1	126	62
					Mink Creek	1	166	82
					Cub River	1	158	87
					Bear River ab ID-UT line	9	157	82
					Malad River	1	190	111

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- (1) - The values listed under the 10% and 90% Chance of Exceeding are actually 5% and 95% exceedance levels.
 (2) - The value is natural flow - actual flow may be affected by upstream water management.

Streamflow Adjustment List For All Forecasts Published In Idaho Basin Outlook Report Streamflow forecasts are projections of runoff volumes that would have occurred naturally without influences from upstream reservoirs or diversions. These values are referred to as natural or adjusted flows. To make these adjustments, changes in reservoir storage, diversions, and inter-basin transfers are added or subtracted from the observed (actual) streamflow volumes. The following list documents the adjustments made to each forecast point in this report. (Revised 12/2000).

Panhandle River Basins

KOOTENAI R AT LEONIA, ID
+ LAKE KOOCANUSA (STORAGE CHANGE)
BOUNDARY CREEK NEAR PORTHILL, ID – No Corrections
MOYIE RIVER AT EASTPORT, ID – No Corrections
SMITH CREEK NEAR PORTHILL, ID – No Corrections
CLARK FORK AT WHITEHORSE RAPIDS, ID
+ HUNGRI HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS RESV (STORAGE CHANGE)
PEND OREILLE LAKE INFLOW, ID
+ PEND OREILLE R AT NEWPORT, WA
+ HUNGRI HORSE (STORAGE CHANGE)
+ FLATHEAD LAKE (STORAGE CHANGE)
+ NOXON RAPIDS (STORAGE CHANGE)
+ PEND OREILLE LAKE (STORAGE CHANGE)
+ PRIEST LAKE (STORAGE CHANGE)
PRIEST R NR PRIEST R, ID
+ PRIEST LAKE (STORAGE CHANGE)
COEUR D'ALENE R AT ENAVILLE, ID - No Corrections
ST. JOE R AT CALDER, ID - No Corrections
SPOKANE R NR POST FALLS, ID
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
SPOKANE R AT LONG LAKE, WA
+ COEUR D'ALENE LAKE (STORAGE CHANGE)
+ LONG LAKE, WA (STORAGE CHANGE)
Clearwater River Basin
DWORKSHAK RESERVOIR INFLOW, ID
+ DWORKSHAK RESV (STORAGE CHANGE)
- CLEARWATER R AT OROFINO, ID
+ CLEARWATER R NR PECK, ID
CLEARWATER R AT OROFINO, ID - No Corrections
CLEARWATER R AT SPALDING, ID
+ DWORKSHAK RESV (STORAGE CHANGE)
Salmon River Basin
SALMON R AT SALMON, ID - No Corrections
SALMON R AT WHITE BIRD, ID - No Corrections

Weiser, Payette, Boise River Basins

WEISER R NR WEISER, ID - No Corrections
SF PAYETTE R AT LOWMAN, ID - No Corrections
DEADWOOD RESERVOIR INFLOW, ID
+ DEADWOOD R BLW DEADWOOD RESV NR LOWMAN
+ DEADWOOD RESV (STORAGE CHANGE)
LAKE FORK PAYETTE RIVER NR MCCALL, ID – No Corrections
NF PAYETTE R AT CASCADE, ID
+ CASCADE RESV (STORAGE CHANGE)
NF PAYETTE R NR BANKS, ID
+ CASCADE RESV (STORAGE CHANGE)

PAYETTE R NR HORSESHOE BEND, ID
+ DEADWOOD RESV (STORAGE CHANGE)
+ CASCADE RESV (STORAGE CHANGE)
BOISE R NR TWIN SPRINGS, ID - No Corrections
SF BOISE R AT ANDERSON RANCH DAM, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
BOISE R NR BOISE, ID
+ ANDERSON RANCH RESV (STORAGE CHANGE)
+ ARROWROCK RESV (STORAGE CHANGE)
+ LUCKY PEAK RESV (STORAGE CHANGE)

Wood and Lost River Basins

BIG WOOD R AT HAILEY, ID - No Corrections
BIG WOOD R NR BELLEVUE, ID - No Corrections
CAMAS CREEK NEAR BLAINE – No Corrections
BIG WOOD R BLW MAGIC DAM NR RICHFIELD, ID
+ MAGIC RESV (STORAGE CHANGE)
LITTLE WOOD R NR CAREY, ID
+ LITTLE WOOD RESV (STORAGE CHANGE)
BIG LOST R AT HOWELL RANCH NR CHILLY, ID - No Corrections
BIG LOST R BLW MACKAY RESV NR MACKAY, ID
+ MACKAY RESV (STORAGE CHANGE)
LITTLE LOST R BLW WET CK NR HOWE, ID - No Corrections
LITTLE LOST R NR HOWE, ID - No Corrections (Disc)

Upper Snake River Basin

HENRYS FORK NR ASHTON, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
HENRYS FORK NR REXBURG, ID
+ HENRYS LAKE (STORAGE CHANGE)
+ ISLAND PARK RESV (STORAGE CHANGE)
+ DIV FM HENRYS FK BTW ASHTON & ST. ANTHONY, ID
+ DIV FM HENRYS FK BTW ST. ANTHONY & REXBURG, ID
+ GRASSY LAKE (STORAGE CHANGE)
FALLS R ABV YELLOWSTONE CANAL NR SQUIRREL, ID
+ GRASSY LAKE (STORAGE CHANGE)
TETON R ABV SO LEIGH CK NR DRIGGS, ID - No Corrections
TETON R NR ST. ANTHONY, ID
- CROSS CUT CANAL
+ SUM OF DIVERSIONS ABV GAGE
SNAKE R NR MORAN, WY
+ JACKSON LAKE (STORAGE CHANGE)
PALISADES RESERVOIR INFLOW, ID
+ SNAKE R NR IRWIN, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)
SNAKE R NR HEISE, ID
+ JACKSON LAKE (STORAGE CHANGE)
+ PALISADES RESV (STORAGE CHANGE)

BLACKFOOT RESERVOIR INFLOW, ID
 + BLACKFOOT RIVER
 + BLACKFOOT RESERVOIR (STORAGE CHANGE)
 SNAKE R NR BLACKFOOT, ID
 + PALISADES RESV (STORAGE CHANGE)
 + JACKSON LAKE (STORAGE CHANGE)
 + DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
 + DIV FM SNAKE R BTW SHELLY AND BLACKFT, ID
 PORTNEUF R AT TOPAZ, ID - No Corrections
 AMERICAN FALLS RESERVOIR INFLOW, ID
 + SNAKE RIVER AT NEELEY
 + ALL CORRECTIONS MADE FOR HENRY'S FK NR REXBURG, ID
 + JACKSON LAKE (STORAGE CHANGE)
 + PALISADES RESV (STORAGE CHANGE)
 + DIV FM SNAKE R BTW HEISE AND SHELLY GAGES
 + DIV FM SNAKE R BTW SHELLY AND BLACKFT GAGES

Southside Snake River Basins
 OAKLEY RESERVOIR INFLOW, ID
 + GOOSE CK ABV TRAPPER CK NR OAKLEY, ID
 + TRAPPER CK NR OAKLEY, ID
 SALMON FALLS CK NR SAN JACINTO, NV - No Corrections
 BRUNEAU R NR HOT SPRINGS, ID - No Corrections
 OWYHEE R NR GOLD CK, NV
 + WILDHORSE RESV (STORAGE CHANGE)
 OWYHEE R NR OWYHEE, NV
 + WILDHORSE RESV (STORAGE CHANGE)
 OWYHEE R NR ROME, OR - No Corrections
 OWYHEE RESERVOIR INFLOW, OR
 + OWYHEE R BLW OWYHEE DAM, OR
 + OWYHEE RESV (STORAGE CHANGE)
 + DIV TO NORTH AND SOUTH CANALS
 SUCCOR CK NR JORDAN VALLEY, OR - No Corrections
 SNAKE R - KING HILL, ID - No Corrections
 SNAKE R NR MURPHY, ID - No Corrections
 SNAKE R AT WEISER, ID - No Corrections
 SNAKE R AT HELLS CANYON DAM, ID
 + BROWNLEE RESV (STORAGE CHANGE)

Bear River Basin
 BEAR R NR RANDOLPH, UT
 + SULPHUR CK RESV (STORAGE CHANGE)
 + CHAPMAN CANAL DIVERSION
 + WOODRUFF NARROWS RESV (STORAGE CHANGE)
 SMITHS FORK NR BORDER, WY - No Corrections
 THOMAS FORK NR WY-ID STATELINE - No Corrections (Disc)
 BEAR R BLW STEWART DAM, ID
 + SULPHUR CK RESV (STORAGE CHANGE)
 + CHAPMAN CANAL DIVERSION
 + WOODRUFF NARROWS RESV (STORAGE CHANGE)
 + DINGLE INLET CANAL
 + RAINBOW INLET CANAL

MONTPELIER CK AT IRR WEIR NR MONTPELIER, ID (Disc)
 + MONTPELIER CK RESV (STORAGE CHANGE)

CUB R NR PRESTON, ID - No Corrections

RESERVOIR CAPACITY DEFINITIONS (Units in 1,000 acre-feet, KAF)

Different agencies use various definitions when reporting reservoir capacity and contents. This table lists these volumes for each reservoir, and defines the storage volumes NRCS uses when reporting capacity and current reservoir storage. In most cases, NRCS reports usable storage, which includes active and inactive storage. (Revised December 2000)

BASIN/ RESERVOIR	DEAD STORAGE	INACTIVE STORAGE	ACTIVE STORAGE	SURCHARGE STORAGE	NRCS CAPACITY	NRCS CAPACITY INCLUDES
<u>PANHANDLE REGION</u>						
HUNGRY HORSE	39.73	--	3451.00	--	3451.0	ACTIVE
FLATHEAD LAKE	Unknown	--	1791.00	--	1791.0	ACTIVE
NOXON RAPIDS	Unknown	--	335.00	--	335.0	ACTIVE
PEND OREILLE	406.20	112.40	1042.70	--	1561.3	DEAD+INACTIVE+ACTIVE
COEUR D'ALENE	--	13.50	225.00	--	238.5	INACTIVE+ACTIVE
PRIEST LAKE	20.00	28.00	71.30	--	119.3	DEAD+INACTIVE+ACTIVE
<u>CLEARWATER BASIN</u>						
DWORSHAK	--	1452.00	2016.00	--	3468.0	INACTIVE+ACTIVE
<u>WEISER/BOISE/PAVETTE BASINS</u>						
MANN CREEK	1.61	0.24	11.10	--	11.1	ACTIVE
CASCADE	--	46.70	646.50	--	693.2	INACTIVE+ACTIVE
DEADWOOD	--	--	161.90	--	161.9	ACTIVE
ANDERSON RANCH	24.90	37.00	413.10	--	450.1	INACTIVE+ACTIVE
ARROWROCK	--	--	272.20	--	272.2	ACTIVE
LUCKY PEAK	--	28.80	264.40	13.80	293.2	INACTIVE+ACTIVE
LAKE LOWELL	7.90	5.80	159.40	--	165.2	INACTIVE+ACTIVE
<u>WOOD/LOST BASINS</u>						
MAGIC	--	--	191.50	--	191.5	ACTIVE
LITTLE WOOD	--	--	30.00	--	30.0	ACTIVE
MACKAY	0.13	--	44.37	--	44.4	ACTIVE
<u>UPPER SNAKE BASIN</u>						
HENRY'S LAKE	--	--	90.40	--	90.4	ACTIVE
ISLAND PARK	0.40	--	127.30	7.90	135.2	ACTIVE+SURCHARGE
GRASSY LAKE	--	--	15.18	--	15.2	ACTIVE
JACKSON LAKE	--	--	847.00	--	847.0	ACTIVE
PALISADES	44.10	155.50	1200.00	--	1400.0	DEAD+INACTIVE+ACTIVE
RIRIE	4.00	6.00	80.54	10.00	80.5	ACTIVE
BLACKFOOT	--	--	348.73	--	348.7	ACTIVE
AMERICAN FALLS	--	--	1672.60	--	1672.6	ACTIVE
<u>SOUTHSIDE SNAKE BASINS</u>						
OAKLEY	--	--	74.50	--	74.5	ACTIVE
SALMON FALLS	48.00	--	182.65	--	182.6	ACTIVE
WILDHORSE	--	--	71.50	--	71.5	ACTIVE
OWYHEE	406.83	--	715.00	--	715.0	ACTIVE
BROWNLEE	0.45	444.00	975.30	--	1419.3	INACTIVE+ACTIVE
<u>BEAR RIVER BASIN</u>						
WOODRUFF NARROWS	--	1.50	57.30	--	57.3	ACTIVE
WOODRUFF CREEK	--	4.00	4.00	--	4.0	ACTIVE
BEAR LAKE	--	--	1421.00	--	1421.0	ACTIVE
MONTPELIER CREEK	0.21	--	3.84	--	4.0	DEAD+ACTIVE

Interpreting Streamflow Forecasts

Introduction

Each month, five forecasts are issued for each forecast point and each forecast period. Unless otherwise specified, all streamflow forecasts are for streamflow volumes that would occur naturally without any upstream influences. Water users need to know what the different forecasts represent if they are to use the information correctly when making operational decisions. The following is an explanation of each of the forecasts.

Most Probable (50 Percent Chance of Exceeding) Forecast. This forecast is the best estimate of streamflow volume that can be produced given current conditions and based on the outcome of similar past situations. There is a 50 percent chance that the streamflow volume will exceed this forecast value. There is a 50 percent chance that the streamflow volume will be less than this forecast value.

The most probable forecast will rarely be exactly right, due to errors resulting from future weather conditions and the forecast equation itself. This does not mean that users should not use the most probable forecast; it means that they need to evaluate existing circumstances and determine the amount of risk they are willing to take by accepting this forecast value.

To Decrease the Chance of Having Too Little Water

If users want to make sure there is enough water available for their operations, they might determine that a 50 percent chance of the streamflow volume being lower than the most probable forecast is too much risk to take. To reduce the risk of not having enough water available during the forecast period, users can base their operational decisions on one of the forecasts with a greater chance of being exceeded (or possibly some point in-between). These include:

70 Percent Chance of Exceeding Forecast. There is a 70 percent chance that the streamflow volume will exceed this forecast value.

There is a 30 percent chance the streamflow volume will be less than this forecast value.

90 Percent Chance of Exceeding Forecast. There is a 90 percent chance that the streamflow volume will exceed this forecast value.

There is a 10 percent chance the streamflow volume will be less than this forecast value.

To Decrease the Chance of Having Too Much Water

If users want to make sure they don't have too much water, they might determine that a 50 percent chance of the streamflow being higher than the most probable forecast is too much of a risk to take. To reduce the risk of

having too much water available during the forecast period, users can base their operational decisions on one of the forecasts with a smaller chance of being exceeded. These include:

30 Percent Chance of Exceeding Forecast. There is a 30 percent chance that the streamflow volume will exceed this forecast value. There is a 70 percent chance the streamflow volume will be less than this forecast value.

10 Percent Chance of Exceeding Forecast. There is a 10 percent chance that the streamflow volume will exceed this forecast value. There is a 90 percent chance the streamflow volume will be less than this forecast value.

Using the forecasts - an example

Using the Most Probable Forecast. Using the example forecasts shown below, users can reasonably expect 36,000 acre-feet to flow past the gaging station on the Mary's River near Death between March 1 and July 31.

Using the Higher Exceedance Forecasts. If users anticipate a somewhat drier trend in the future (monthly and seasonal weather outlooks are available from the National Weather Service every two weeks), or if they are operating at a level where an unexpected shortage of water could cause problems, they might want to plan on receiving only 20,000 acre-feet (from the 70 percent chance of exceeding forecast). In seven out of ten years with similar conditions, streamflow volumes will exceed the 20,000 acre-foot forecast.

If users anticipate extremely dry conditions for the remainder of the season, or if they determine the risk of using the 70 percent chance of exceeding forecast is too great, then they might plan on receiving only 5000 acre-feet (from the 90 percent chance of exceeding forecast). Nine out of ten years with similar conditions, streamflow volumes will exceed the 5000 acre-foot forecast.

Using the Lower Exceedance Forecasts. If users expect wetter future conditions, or if the chance that five out of every ten years with similar conditions would produce streamflow volumes greater than 36,000 acre-feet was more than they would like to risk, they might plan on receiving 52,000 acre-feet (from the 30 percent chance of exceeding forecast) to minimize potential flooding problems. Three Out of ten years with similar conditions, streamflows will exceed the 52,000 acre-foot forecast.

In years when users expect extremely wet conditions for the remainder of the season and the threat of severe flooding and downstream damage exists, they might choose to use the 76,000 acre-foot (10 percent chance of exceeding) forecast for their water management operations. Streamflow volumes will exceed this level only one year out of ten.

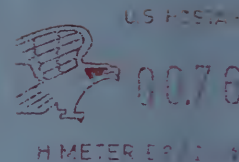
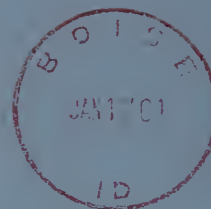
WEISER, PAYETTE, BOISE RIVER BASINS
Streamflow Forecasts

Forecast Point	Forecast Period	Drier Conditions				Future Conditions				Wetter	
		90% (1000AF)	70% (1000AF)	50% (Most Probable) (1000AF)	30% (1000AF)	10% (1000AF)	30% (1000AF)	10% (1000AF)	30-Yr Avg. (1000AF)		
SF PAYETTE RIVER at Lowman	APR-JUL	329	414	471	528	613	528	613	432		
	APR-SEP	369	459	521	583	673	583	673	488		
BOISE RIVER near Twin Springs (1)	APR-JUL	443	610	685	760	927	760	927	631		
	APR-SEP	495	670	750	830	1005	830	1005			

For more information concerning streamflow forecasting ask your local NRCS field office for a copy of "A Field Office Guide for Interpreting Streamflow Forecasts" or visit our Web page.



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